Lucas Barton

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Mechanical engineer with 7+ years of experience in mass spectrometry, product development, and precision hardware design—including thermal and airflow management to IP54 standards. Now leveraging that expertise to pivot into decarbonization work and apply systems-level problem solving to HVAC design, energy retrofits, and LL97 compliance. Actively expanding knowledge of building science through EPA 608 preparation and NYC-based sustainability coursework.

Education

Northeastern University Boston, MA

Bachelor of Science in Mechanical Engineering May 2019

GPA: 3.5/4.0

Honors: Dean's List, Presidential Global Scholarship, Music Scholarship, Dialogue of Civilizations Scholarship

Relevant Coursework: Biomechanics, System Analysis & Control, Heat Transfer, FEA, Mechanics & Design, Dynamics & Vibrations, Mechanics of Materials, Fluid Mechanics, Fundamentals of CS, Anatomy & Physiology

Activities: Enabling Engineering, ASME, NUSound, Jazz Ensemble, Pep Band, Wind Ensemble, Pit Orchestra

Study Abroad: São Paulo, Brazil – coursework: Alternative Energy, Brazilian Culture May - June 2015

Work Experience

908 Devices Boston, MA

Mechanical Engineer November 2021 - November 2024

- Mechanical lead on MX908 Beacon - award-winning remote area monitoring device for aerosol and vapor threat detection; managed product from concept through beta deployment and production scale-up
- Led thermal and airflow design for compact enclosures and analytical instrumentation, ensuring environmental performance and IP54 protection
- Coordinated pilot builds, managed field units, and developed detailed designs for the full 908 product family
- Regularly applied experience in CAD, 3D printing, sheet metal, and injection-molded plastics to develop precise microfluidic assemblies, ruggedized housings, and innovative prototypes

Teradiode - a Panasonic Company Wilmington, MA

Mechanical Engineer October 2019 - November 2021

- Ownership of opto-mechanical laser engine system including design, prototyping, and floor builds
- SolidWorks PDM and CAD experience from 2 years of maintaining and revising 1k+ part assembly, making part/assembly drawings to GD&T standards, and utilizing FEA
- Precise testing on optical parts in an ISO 7 clean room environment using custom engineered fixtures
- Designed complex metal, sheet metal, and electric parts and assemblies with high tolerances resulting in process and manufacturing improvements

Tactus Boston, MA

Co-Founder and Chief Product Officer August 2019 - May 2023

- Developed wearable device that enables Deaf and Hard of Hearing to feel music via tactile sensation
- MassChallenge alumn responsible for mechanical, electrical, and garment design of device
- Lead inventor on U.S. Patent No. 11,140,472 utilizing signal processing and strategically placed transducers
- Organized and conducted customer interviews to directly receive feedback on device and inform design

Fortify Boston, MA

Mechanical Engineering Co-op July - December 2018

- Evaluated and tested 3D printing systems to drive solutions in a small start-up environment
- Designed injection molds and components for in house 3D printers with Creo ProE and FEA software
- Developed firmware for sensors, analysis, and optimization of printer performance
- Fabricated sheet metal assemblies, electromechanical systems, and prototypes through machining, soldering, tolerance analysis, and fluids analysis

Stryker Trauma GmbH Kiel, Germany

Biomechanical Engineering Co-op July - December 2017

- Utilized Creo ProE to design bone rapids for testing, update bone models and test setups, and create novel bone molds, jigs, and unique tools for internal use
- Performed static and dynamic tests on bone implants using servo-hydraulic test machines
- Prepared test reports for product launches adhering to FDA guidelines and ASTM standards